

# Access to VLT Data in the ESO Archive

B. LEIBUNDGUT, B. PIRENNE, M. ALBRECHT, A. WICENEC, and K. GORSKI

The science archive at ESO doesn't just collect the data from the telescopes, it has a number of other functions. These include the distribution of the service mode data obtained at the VLT, the immediate availability of all calibration data from all telescopes from which data are archived (in addition to the VLT data we are currently archiving the data from the 3.6-m, the NTT, and the 2.2-m), the public access to the science data after the proprietary period has expired, and the collection of all master calibrations. Other services offered through the archive are the seeing databases from La Silla and Paranal, several astronomical catalogues (e.g. USNO, GSC 1, Tycho-2), and on-line access to the digital sky survey, among other things. The archive is a joint operation of the ECF and ESO and contains all the HST data as well. The archive staff is shared between these two groups. The ESO archive is accessed at <http://archive.eso.org> or by clicking on 'Observing Facilities and Operations' on the ESO home page (<http://www.eso.org>) and then choosing the 'Science Archive Facility'. This article gives an overview over the current status and some of the new features in the ESO/HST archive.

## 1. Data Available in the Archive

Currently the archive collects data from FORS1 and ISAAC at UT1, EFOSC2 and CES at the 3.6-m, EMMI, SUSI2, and SOFI at the NTT and the Wide-Field Imager (WFI) at the MPG/ESO 2.2-m. A graphical overview over the number of data sets in the archive at the beginning of February

2000 can be seen in Figure 1 for the ESO and Figure 2 for the HST archive, respectively. The commissioning and science verification data of UVES and FORS2 have already entered the archive. Relevant information on each observation is entered into a relational database, which can be queried through a Web page. The database can be searched for specific celestial objects by their regular names (resolved to positions by querying either SIMBAD or NED), position on the sky, by ESO's programme identification, data type, telescope or instrument, or any combination of these parameters. In addition, the FITS headers of the VLT data are included online and for FORS1 imaging data previews can be investigated. Archive data can be requested through the results page of any query. Please note that you have to be a registered user of the ESO/ECF archive to retrieve data. Registration can be done directly from the archive Web page.

EMMI/NTT data have systematically been archived since 1991 (see *The Messenger* No. 93, page 20). The other telescopes and instruments have been added continuously. The one-year proprietary period for the first VLT data will expire at the beginning of April and all further science data will successively become public. The raw commissioning and science verification data of FORS1, ISAAC, and UVES are already publicly available through the archive. The science verification data can also be retrieved in processed form at <http://www.eso.org/science/ut1sv> and <http://www.eso.org/paranal/sv>. The raw ESO Imaging Survey data (da Costa et al. 1999, *The Messenger* No. 98, page 36) can also be retrieved from the archive.

Data from the wide-field imager are entering the public domain as well.

To ease the access to the various public data sets we have created a special page ([http://archive.eso.org/archive/public\\_datasets.html](http://archive.eso.org/archive/public_datasets.html)). This page contains links to the above data sets and some new test data that are publicly available. Recently, data of polarisation measurements of the bright Type II Supernova SN 1999em (IAU Circulars 7296, 7296, 7305, and especially 7355) have become available. These data have been taken during the technical night of 2 November 1999 shortly after the supernova was discovered. The raw data with some information from the night logs can be found there. We will make data sets public in the future through this page, so please keep your eyes open.

## 2. Data Delivery

Once you made your selection from the archive, you can request data sets from the results page. After submission of the request you will be notified by email at the address you entered when you registered. Please make sure that this address is up to date. You have a choice of which medium you prefer for the data delivery. In most cases for small (< 200 Mb) requests the data are provided through ftp. Larger requests receive the data by regular mail on CD-ROMs, like in the case of service mode programmes. For high data volumes, e.g. requests for WFI data above 10 Gb, the choice is limited to DLT tapes. Other media options are DAT tapes (DDS-1 and DDS-3 formats) and Exabyte tapes. We are now also starting to ship data on DVD-R disks.

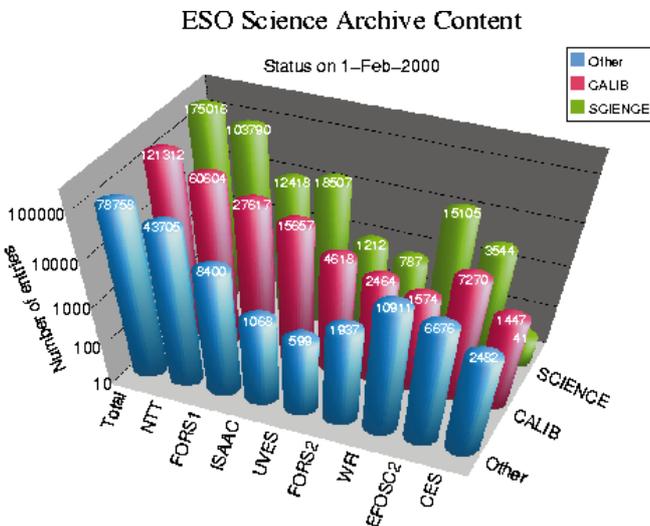


Figure 1.

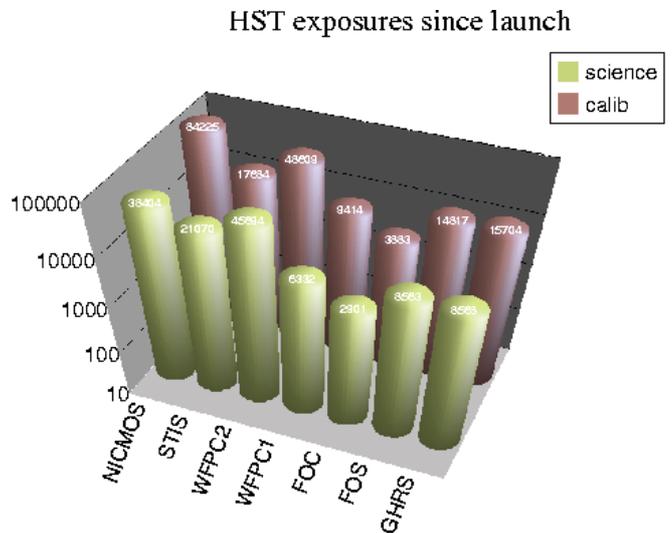


Figure 2.

Please contact [catalog@eso.org](mailto:catalog@eso.org) for special cases.

Once the data set has been created you are again notified by e-mail about the dispatch of the data from ESO.

### 3. Future Developments

We are currently redesigning the archive web pages and their layout. A first example is the archive entry page (Fig. 3). This should result in an improved presentation of the available data and their usefulness for specific research projects. We also will add new parameters to the database to make sure that we cover most of the requests and make the selection criteria as varied as possible to make the searches for specific data sets easier.

A typical example is the search for calibration data that correspond to a given scientific data set. Right now, these calibrations have to be selected manually which is a tedious process. We are planning to implement a more automatic procedure in the future, which would simplify the search significantly. One of the main ongoing projects is the inclusion of the master calibration data produced by the quality control group into the archive. You then should be able to find the corresponding calibration data in a processed form in the archive.

Please let us know if you find deficiencies in the archive so that we can address them. You can contact any of us at the e-mail addresses given at the end of this article.



## Science Archive Facility

The ESO/ST-ECF Science Archive is a joint collaboration of the European Southern Observatory (ESO) and the Space Telescope - European Coordinating Facility (ST-ECF). To retrieve offline observational data you have to register as an ESO/ST-ECF Archive user.

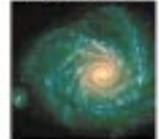
### On-Line Services

- ESO Databases  
VLT Science Exposures [go](#)
- HST Databases  
HST Science Exposures [go](#)
- Catalogs & DSS  
Digitized Sky Survey [go](#)
- Tools & Development  
The JSky Initiative [go](#)
- Data Dictionaries  
ESO's Data Interface [go](#)
- Related External Services  
The Vizier catalogs, CDS [go](#)

### News and updates

- Special Page with the Public Datasets.
- New Archive Facility Web Site: should you have any comments on the new web site layout, please send us a mail.
- Astrometric catalogs server (Hipparcos, Tycho, TRC).
- New DSS-1/DSS-2 client with Red and Blue surveys available. New client software available: just download. Interactive dss2 Blue or Red available.
- The JSky initiative: Building a repository of reusable Java Components for Astronomy.
- What's New in the Archive Web [Last update: 17 Jan 2000].

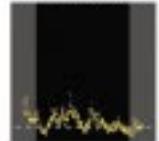
### Public Datasets



### Digitized Sky



### Paranal Metro



Collaborations of ESO and ST-ECF Archive staff members with the Canadian Astronomy Data Centre (CADC) and the Centre des Données astronomiques de Strasbourg (CDS) take place in the areas of software development and data reduction.

ESO HOME ST-ECF HOME Help Search  
Send comments to [catalog@eso.org](mailto:catalog@eso.org)  
Last modified: Tue Jun 18 15:20:49 MET 2000

[bleibund@eso.org](mailto:bleibund@eso.org); [bpirene@eso.org](mailto:bpirene@eso.org) – [malbrech@eso.org](mailto:malbrech@eso.org); [awicenec@eso.org](mailto:awicenec@eso.org) – [kgorski@eso.org](mailto:kgorski@eso.org)

## Chile Astroclimate, a Biannual Update

M. SARAZIN, ESO

Not long ago (*The Messenger* 97, September 99), climate change was identified as the main responsible for the degradation of observing conditions (seeing) at Paranal. It was pointed out in particular that the weakening of the traditional westerly wind pattern was more frequently allowing turbulent air from inland to blow over the coastal cordillera.

Figure 1: Seeing Statistics at Paranal since UT1 first light: monthly average (red), median (black) and 5th percentile (blue). The dashed lines give the respective long-term (1989–1995) site characteristics. Seeing is reconstructed from DIMM measurements taken at 6 m above ground, at 0.5 micron and at zenith. Because of the finite outer scale of the atmospheric turbulence, actual large-telescope image quality can be better than predicted by DIMM (see e.g.: *The seeing at the William Herschel Telescope*, R.W. Wilson et al., *MNRAS* 309, 379–387, 1999).

